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Measuring Student Achievement:

Comparable Test Results for Participating SREB States, the Region, and the Nation

A Report of the
Southern Regional Education Board/National Assessment of Educational Progress
1986 Program with

Arkansas, Florida, Louisiana, North Carolina,
South Carolina, Tennessee, Virginia, West Virginia

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Southern Regional Education Board

FOREWORD

Southern Regional Education Board states are serious about improving student achievement. Eight states have taken a dramatic step that underscores just how serious they are. They have measured their students' achievement against the most current and truly national results available.

Arkansas, Florida, Louisiana, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia have used the same National Assessment of Educational Progress tests given in the same way to more than 20,000 students in nearly 750 schools so that the results are comparable to each other. These SREB states are pointing the way for a new nationwide system of measuring student achievement and educational progress.

The fact is that today we do not have current and reliable measures of how student achievement in a state compares to national and regional results or of how students are doing compared to students in other states. The same "national tests" are used by only a few states; averages are set only about once every decade; tests are often given at different grade levels, at different times of the year, under different conditions; and scores are reported in different ways.

This in part is why the action of these SREB states is important. Nearly every state has in place new reforms aimed at raising the quality of education. The obvious question is--How will we know that we are making progress? Many measures of progress will be important, but none will surpass student achievement. Student achievement can be measured in many ways. One approach is to measure student learning based on standards linked to the textbooks and curriculum used in the schools. All states now do this and will continue to do so.

Another measure of student achievement is to look beyond state lines and state-set standards to determine how we are doing in a larger arena. Today states are competing fiercely on the economic front. To be in a really competitive position, SREB states must provide an education as good as that in the rest of the country.

These eight states are saying clearly that they are committed to doing this. The results of this year's testing program--which assessed the reading and writing proficiency of 11th-grade students--are encouraging. This assessment may be modest. Considering that a half century ago states forming the SREB region were the economic and educational stepchild of the nation, the results are astounding. In most cases, the results

show that students in the eight participating SREB states are at the national averages. When we consider that the real impact of the recent educational reforms is yet to be seen, the present standing is very good news.

The national average may not be an acceptable long-range goal, but it is a good place to start. Where any of the eight SREB states fall below the national average, the margin is usually a slim one. This year's results are all the more encouraging since student performance was measured at the 11th grade and most of the reform efforts have not been in place long enough to bring about significant improvement in the performance of students in this next-to-last year of high school.

For the eight states, this year's results are an important benchmark. States are betting that their students' achievement will improve, and they have dared to make that a commitment by participating in a program that puts the results on the line.

Several findings should lead all states to take note. First, the discrepancy between the achievement levels of white and black students remains too large. The gap in the SREB states is no greater than that nationally, but that is of little comfort. The reading achievement levels of black 11th-grade students is basically the same as for white 7th-graders. This fact is part of the reason that unacceptably small numbers of black students are enrolling in and graduating from college.

The overall reading achievement of all 11th-graders on the National Assessment of Educational Progress tests tells us something important about students' readiness for college education. The results show that only about 40 percent of these high school students are reading well enough to begin college-level work. And yet the number of high school students going to college is a good bit higher than this. Simply put, a sizable percentage of college freshmen are not reading well enough to do college-level work. Few of them will overcome this handicap while in college unless states face the reality of these problems. SREB's recent report, Getting Students Ready For College, outlines the kinds of state actions needed to deal squarely with this problem.

Winfred L. Godwin
President

Several states know how their students' achievement compares to current and truly national and regional results and to each other's results. Before the Southern Regional Education Board/National Assessment of Educational Progress (NAEP)* testing project, this had never been known. The 1986 program included Arkansas, Florida, Louisiana, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. The reading and writing proficiency of 11th-grade students was assessed--reading by Arkansas, Florida, Louisiana, South Carolina, and West Virginia; and writing by Florida, Louisiana, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

The tests used in the SREB/National Assessment project consisted of selected reading and writing exercises developed and administered to a national sample of 11th-grade students by the National Assessment of Educational Progress.

The results of the SREB/National Assessment project are dramatic. In reading and writing, students in the majority of the participating SREB states are achieving at the national average; all of the participating states score at the Southern regional average.**

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*Both the National Assessment of Educational Progress and the SREB/National Assessment program are administered by Educational Testing Service (ETS).

**The NAEP region does not include three SREB states--Maryland, Oklahoma, and Texas.

The similarity of the data for the SREB participating states is striking. And the consistency of the states' results to both regional and national results challenges traditional views about the poor quality of education in the South. From the SREB/National Assessment data it is clear that reading achievement in four of the five participating states and writing achievement in a majority of the participating states are comparable to the nation's.

Achievement differences in reading between blacks and whites and between males and females are basically the same in the SREB states as in the nation--white students score higher than black students; females score higher than males. The same is true for writing--females write better than males, and white students write better than black students.

Importance of the SREB/National Assessment Results

The findings for the 1986 Southern Regional Education Board/National Assessment testing program are important for several reasons.

- Eight states have the most current and reliable measure of how their students' achievement in reading and/or writing compares to truly national and regional results. They also have comparable data on how their students' achievement compares to that in other states. These states have new benchmarks to gauge their students' relative achievement levels and they now have a way of determining if their educational progress is keeping pace with an up-to-date measure for selected SREB states, the region, and the nation.

- SREB states have again demonstrated that student achievement can be assessed in ways that make state, regional, and national comparisons possible. Further, they have demonstrated that

states can agree on the content for such an assessment, even in a subject area as complex as writing. Prior to the SREB/National Assessment program it had not been shown that testing technology could be used in a plan that states would find feasible, nor had states ever agreed to cooperate in a student testing program which would produce results that were comparable among states.

- These SREB/National Assessment results give states information that goes beyond minimum competency testing. The results from the SREB/National Assessment program show whether students are reading or writing at levels beyond minimum levels, and the information is presented in terms that define and interpret what these different levels mean.

- The SREB/National Assessment program--the process and the results--continues to provide valuable information for a nationwide program in which all states could participate. The experience of Arkansas, Florida, Louisiana, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia with the SREB/National Assessment program can be helpful to the Council of Chief State School Officers, which is beginning to develop a similar nationwide program.

- The SREB/National Assessment program offers a way of establishing a legitimate comparison for student achievement in the states and nation. Unlike the Scholastic Aptitude Test (SAT) and the American College Testing (ACT) program, SREB/National Assessment results are based on a representative sample of each state's students. SAT and ACT results are for only a portion of those students who are planning to attend college. For example, nationally about two-fifths of high school graduates take the SAT; the percentages range from as little as 3 percent in

several states to more than 60 percent in many others. The SAT results come with the warning "Making comparisons of states, or ranking them, on the basis of SAT scores alone is invalid...." The state-based National Assessment program provides a representative picture of the achievement of all students in a state. In addition, the National Assessment program goes beyond just reporting numbers (although it does that) and indicates what levels of skills students have and what this means in practical terms.

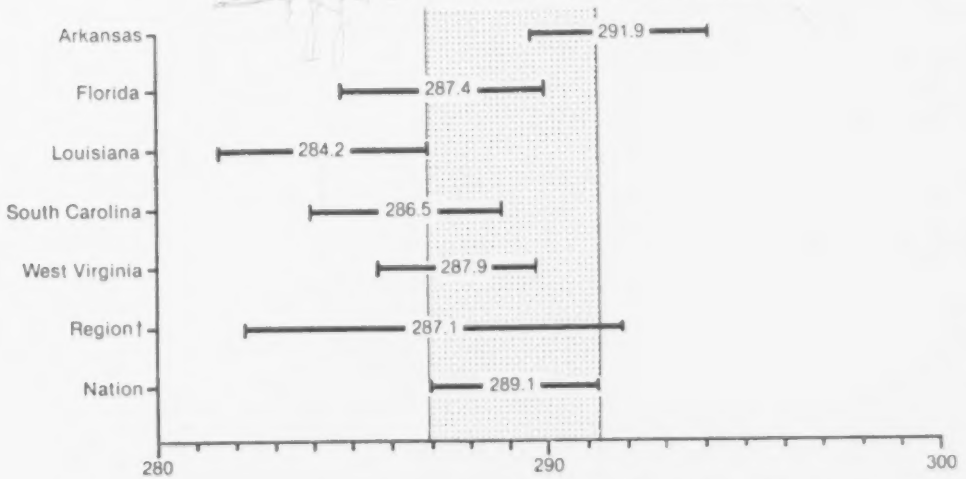
- The results of the SREB/National Assessment program can give the states new insights about college readiness and the need for remedial education. For example, the reading test presents results at five levels, from rudimentary to advanced. Eleventh-grade students who score at the adept and advanced levels probably possess the reading skills to begin college-level work. College-bound students at the intermediate level may need remedial help; students below this level most certainly will. The writing test identifies students with adequate or better writing skills. Eleventh-grade students writing at these levels are probably ready to begin college-level work; students below these levels probably need remedial help.

READING

Reading achievement of 11th-grade students participating in the SREB/ National Assessment program is similar to the national results in many ways--

- **In the past decade the gap in reading achievement between the NAEP Southern region and the other regions of the country has narrowed considerably, due largely to improvements in SREB states.**
- **Large proportions of black students remain at the lowest reading levels despite recent increases.**
- **Females read better than males.**
- **Arkansas, Florida, South Carolina, and West Virginia each scored at the national average. Only Louisiana scored significantly lower than the national average.**

Figure 1
Average* Reading Scores of 11th Grade Students in SREB States
Participating in SREB/National Assessment Program, 1986



*The range depicted around each average is plus or minus two standard errors.
†NAEP Region does not include three SREB states — Maryland, Oklahoma, and Texas.

* A statistical test was used to determine whether each state's average was enough different from the national average so as to be a result of student performance and not a result of sampling error. Tests of this type traditionally do not focus on a single score but rather on a narrow range of scores surrounding an average. This range is defined as the average score plus or minus two standard errors. This means that one can be 95 percent sure that the average is in this range.

What Do The Reading Scores Mean?

The National Assessment of Educational Progress scores reading achievement on a scale from 0 to 500 and defines reading in five different skill levels: Rudimentary, Basic, Intermediate, Adept, and Advanced.

Rudimentary (150)

Readers who have acquired rudimentary reading skills and strategies can follow brief written directions. They can also select words, phrases, or sentences to describe a simple picture and can interpret simple written clues to identify a common object. Performance at this level suggests the ability to carry out simple, discrete reading tasks.

Basic (200)

Readers who have learned basic comprehension skills and strategies can locate and identify facts from simple informational paragraphs, stories, and news articles. In addition, they can combine ideas and make inferences based on short, uncomplicated passages. Performance at this level suggests the ability to understand specific or sequentially related information.

Intermediate (250)

Readers with the ability to use intermediate skills and strategies can search for, locate, and organize the information they find in relatively lengthy passages and can recognize paraphrases of what they have read. They can also make inferences and reach generalizations about main ideas and author's purpose from passages dealing with literature, science, and social studies. Performance at this level suggests the ability to search for specific information, interrelate ideas, and make generalizations.

The reading score averages for the nation and the participating SREB states fall between Intermediate and Adept.

Adept (300)

Readers with adept reading comprehension skills and strategies can understand complicated literary and informational passages including material about topics they

study at school. They can also analyze and integrate less familiar material and provide reactions to and explanations of the text as a whole. Performance at this level suggests the ability to find, understand, summarize, and explain relatively complicated information.

Advanced (350)

Readers who use advanced reading skills and strategies can extend and restructure the ideas presented in specialized and complex tests. Examples include scientific materials, literary essays, historical documents, and materials similar to those found in professional and technical working environments. They are also able to understand the links between ideas even when those links are not explicitly stated and to make appropriate generalizations even when the texts lack clear introductions or explanations. Performance at this level suggests the ability to synthesize and learn from specialized reading materials.

Overall reading scores of the five states were quite similar but there are notable differences at different skill levels.

All states report 100 percent of their students achieving at or higher than the lowest level, the Rudimentary level. Thus, essentially all students in the participating states can follow brief written directions, describe a simple picture, and carry out simple, discrete reading tasks.

Table 1
Percentage of All Students Reading at National Assessment of Educational Progress Levels of Reading Proficiency

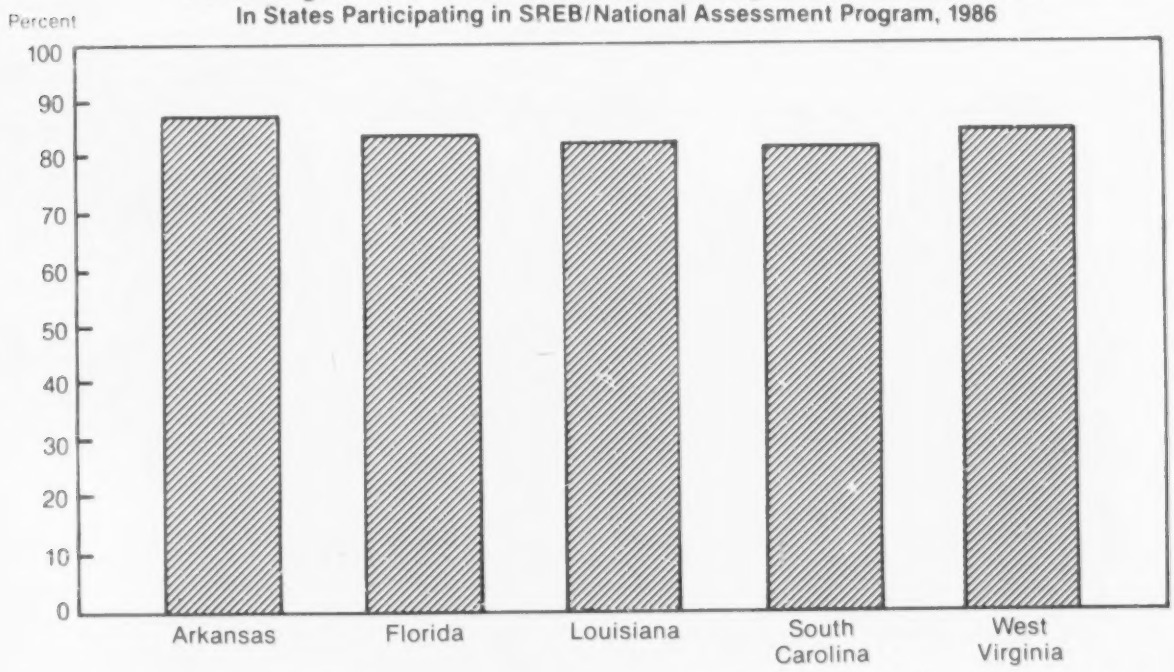
	Rudimentary	Basic	Intermediate	Adept	Advanced
Nation	100.0	98.7	84.8	40.2	5.0
Region†	100.0	98.4	82.4	38.5	5.0
Arkansas	100.0	99.1	87.1*	41.0	6.5*
Florida	100.0	98.7	82.4	37.2	6.7*
Louisiana	100.0	99.3*	81.6*	32.6*	4.6
South Carolina	100.0	98.5	80.4*	35.2*	7.3*
West Virginia	100.0	98.8	83.5	37.7	5.4
Five-state average	100.0	98.9	83.0	36.7	6.1

*Significantly different from the national average.
†NAEP Region does not include SREB states — Maryland, Oklahoma, and Texas.

At the second lowest level, the Basic level, only Louisiana has a percentage of students that is significantly higher than the nation's. Louisiana's lower overall average reading performance probably means that a slightly larger percentage of Louisiana students achieve at the Basic level than in the other states. The percentages of students in Arkansas, Florida, South Carolina, and West Virginia achieving at least this level are about the same as for the nation. Students reading at the Basic level can locate and identify facts from simple paragraphs, combine ideas, and make inferences based on short uncomplicated passages.

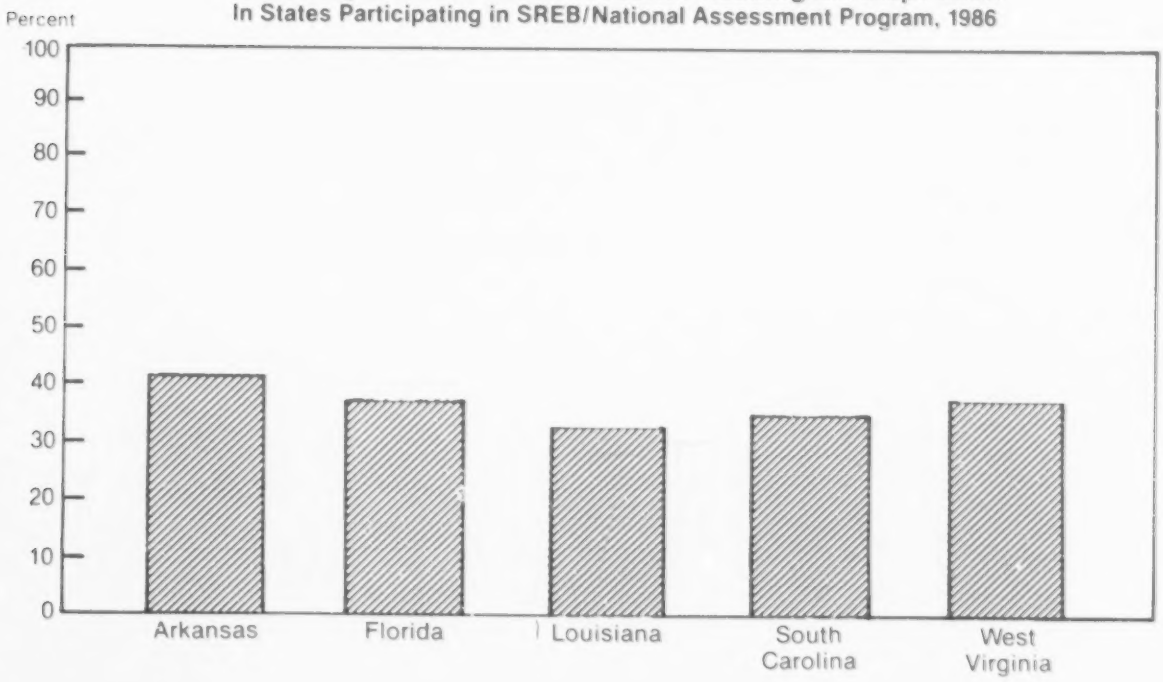
At the middle reading level, the Intermediate level, the differences among the five states begin to broaden. Arkansas has a larger percentage of students at the Intermediate level than the national average and a higher percentage than the other five states. Louisiana and South Carolina have smaller percentages of students achieving at this level than is the case nationally.

Figure 2
Percentage of 11th Grade Students Reading at Intermediate Level
In States Participating in SREB/National Assessment Program, 1986



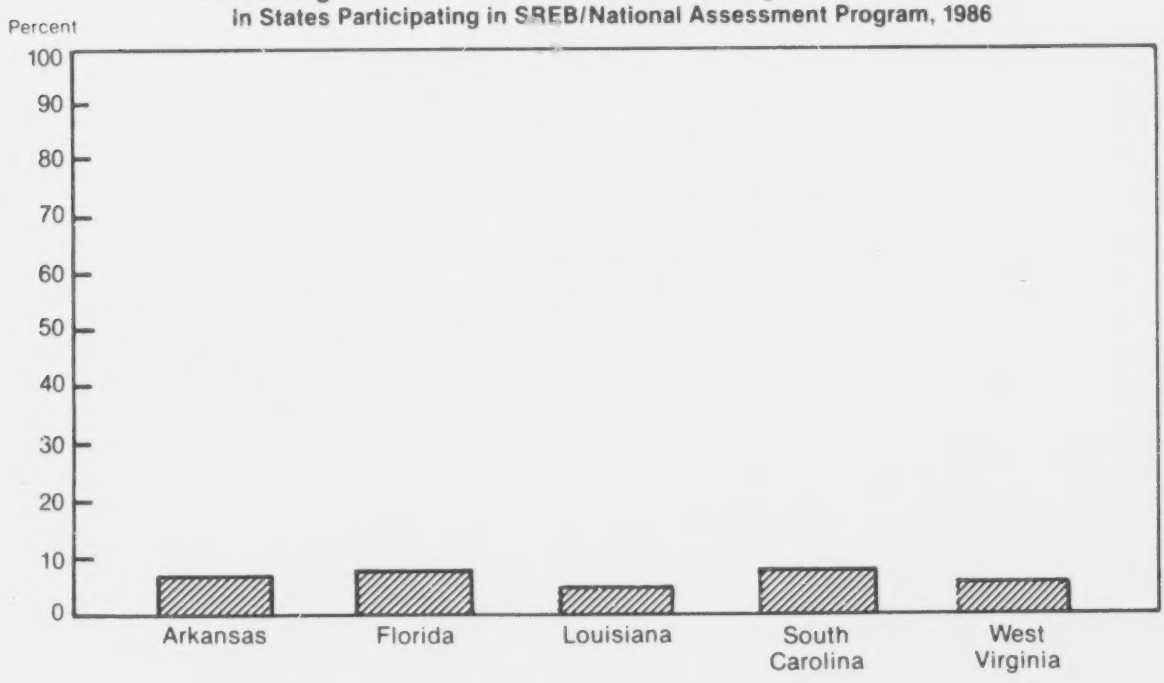
Performance at the second highest level, the Adept level, begins to highlight the problem of high school students not having the reading skills necessary for college-level work. Students reading at the Adept level can find, understand, summarize, and explain relatively complicated material and some can even synthesize and learn from specialized materials. These skills are needed for success in college-level work, yet in each of the five states participating in the SREB/National Assessment program, fewer than half of the 11th-grade students have acquired this level of reading proficiency.

Figure 3
Percentage of 11th Grade Students Reading at Adept Level
In States Participating in SREB/National Assessment Program, 1986



At the Advanced, or highest, level of reading achievement, Arkansas, Florida, and South Carolina are above the national average in the percentage of students scoring at this level. Students at this level can infer links among ideas, make generalization, and synthesize, and learn from specialized materials. So while all states have too few students reading at the higher levels, Arkansas, Florida, and South Carolina do have a notable percentage of students reading at the highest level. This is particularly interesting in the case of South Carolina because the state appears to have a much more diverse 11th-grade population in terms of reading achievement than the other states.

Figure 4
Percentage of 11th Grade Students Reading at Advanced Level
in States Participating in SREB/National Assessment Program, 1986



Most black students in grade 11 are not reading at satisfactory levels. This is true nationally and in the SREB states. Even at the Basic level, the second lowest, there is a smaller percentage of blacks than whites. A look at the five-state averages shows that the difference of 2 percentage points between black and white students at the Basic level rises rapidly at higher skill levels. At the Intermediate level there is a difference of 33 percentage points between black and white students, and at the Adept level, the second highest, there is a 29 percentage point difference. And, fewer than 18 percent of black 11th-grade students in the five states have the reading skills probably needed to begin college-level work.

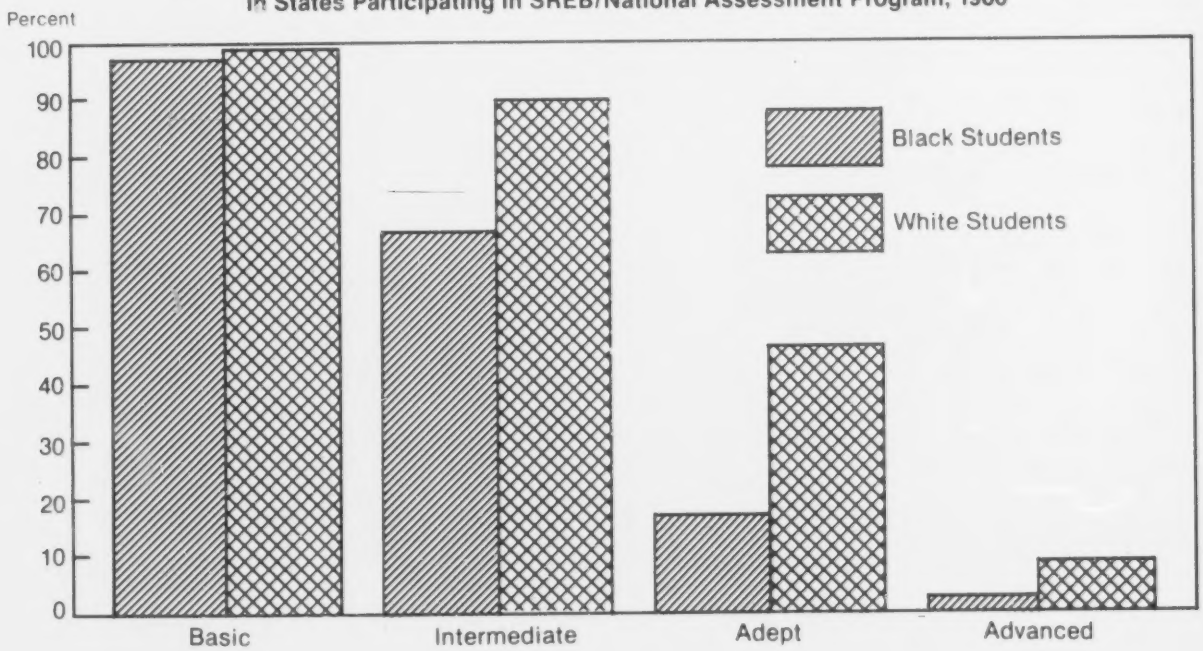
Table 2
Percentage of Black and White Students Reading at National Assessment of Educational Progress Levels of Reading Proficiency

	Rudimentary		Basic		Intermediate		Adept		Advanced	
	Black	White	Black	White	Black	White	Black	White	Black	White
Nation	100.0	100.0	97.1	99.3	68.8	87.6	19.1	46.6	1.0	6.1
Arkansas	100.0	100.0	96.2	99.8*	65.3	92.6*	13.9*	47.6	0.2*	8.1*
Florida	100.0	100.0	97.5	99.5	67.5	88.5	17.6	46.1	2.0	8.9
Louisiana	100.0	100.0	98.6*	99.8*	68.4	91.5	13.5*	45.6	0.9	7.1
South Carolina	100.0	100.0	97.6	99.3	67.9	88.7	12.9*	48.4	1.5	10.9*
West Virginia	100.0	100.0	97.6	98.9	64.0	85.2*	22.2	38.8*	1.2	5.6
Five-state average	100.0	100.0	97.5	99.5	66.6	89.3	16.0	45.3	1.2	8.1

*Significantly different from the national average.

These differences in skill level between black and white 11th-grade students are vividly depicted in Figure 5. The differences point to the need for improved or augmented reading instruction for black students to allow them to take advantage of postsecondary educational opportunities. However, it should be emphasized that the proportions of white students at the Adept and Advanced levels also need to be raised.

Figure 5
Levels of Reading Proficiency of 11th Grade Black and White Students
In States Participating in SREB/National Assessment Program, 1986



The national and state averages for black students consistently place them in the Intermediate level (250). This means that 11th-grade black students are reading at about the same level as white 7th-grade students nationally.

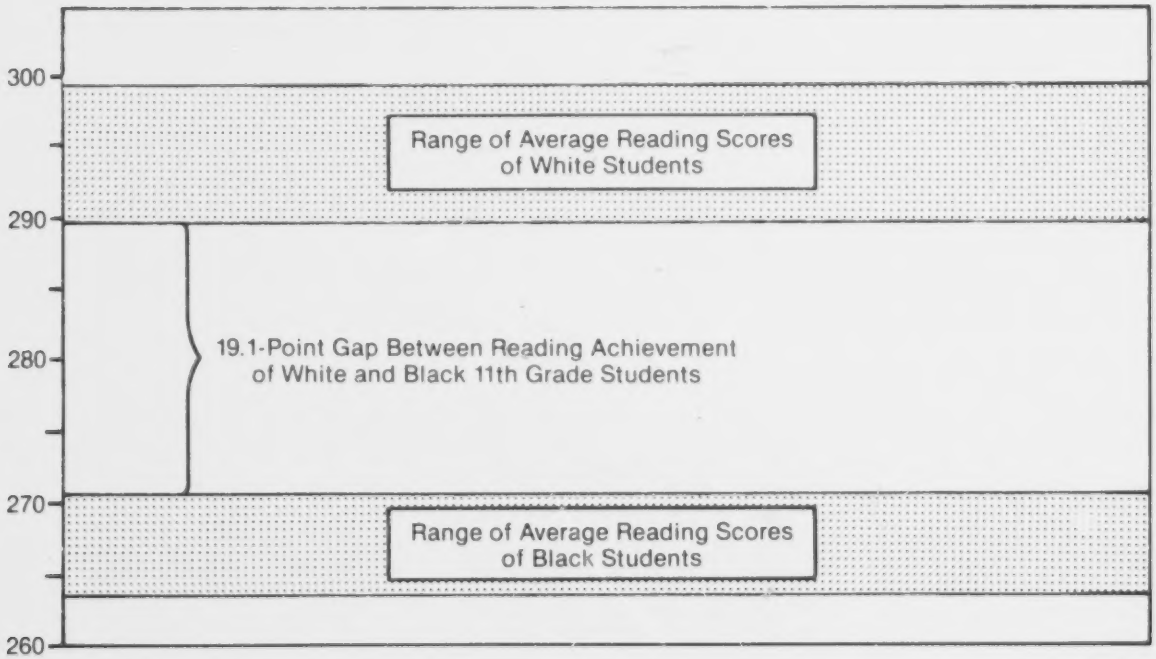
Table 3
Average Reading Scores
for Black and White Students

	Blacks	Whites
Nation	266.6	295.8
Arkansas	263.2	299.1*
Florida	265.7	296.6
Louisiana	266.9	296.4
South Carolina	266.1	299.4*
West Virginia	270.3	289.5
Five-state average	266.4	296.2

*Significantly different from the national average for white students.

Another startling way to examine these data is to look at the high and low averages on a state basis for black students and compare this range to the high and low averages for white students. As shown in Figure 6, the lowest state average for white students is over 19 points higher than the highest state average for black students. Of course, this is not to say that there aren't some white students achieving only as high as the Intermediate range and some black students achieving in the Adept range. But, the separate ranges do remind one of the discrepancy between black and white student performance.

Figure 6
Range of Average Reading Scores of 11th Grade Black and White Students
In States Participating in SREB/National Assessment Program, 1986


300
290
280
270
260
Range of Average Reading Scores of White Students
19.1-Point Gap Between Reading Achievement of White and Black 11th Grade Students
Range of Average Reading Scores of Black Students

Nationally, females have a 10-point higher average reading score than do males. Each of the participating states reflects this pattern, although West Virginia has an almost 16-point difference between male and female students. The weighted average of the five states, however, is about 10 points.

Table 4
Average Reading Scores for Male and Female Students

	Males	Females
Nation	284.1	294.2
Arkansas	286.6	297.4
Florida	282.1	292.2
Louisiana	279.6*	288.4*
South Carolina	281.2	291.8
West Virginia	279.8*	295.5
Five-state weighted average	281.8	292.3

*Significantly different from the national average.

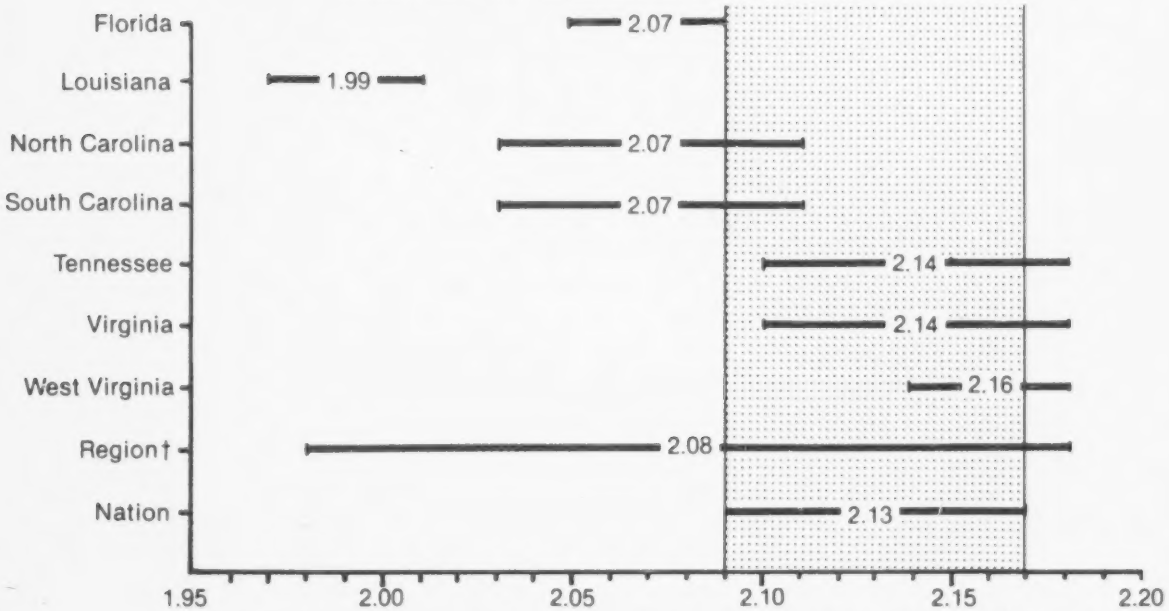
WRITING

In writing, the overall results are similar to the reading results, except that during the past decade writing achievement has not improved nationally.

- All but one participating SREB state earned scores close to the national average.
- Black students scored lower than white students. Large proportions of black students are unprepared for college-level writing tasks.
- Males scored lower than females.

The results show how similar students' writing achievement is in Florida, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. The similarity is striking. Three states have exactly the same average: Florida, North Carolina, and South Carolina each have an average of 2.07 on a 4.0 scale. And, although in the statistical sense 2.07 is significantly different from the national average of 2.13, the scores are similar conceptually, that is, students scoring at 2.07 and 2.13 are writing at the Minimal level. Also at this level are students in Tennessee and Virginia, with an average of 2.14; West Virginia has a 2.16 average. Only Louisiana's average of 1.99 is noticeably below the national average. Louisiana, however, is not significantly different from the National Assessment's 12-state regional average. Based on the averages, unfortunately all of the participating states have too high a percentage of students scoring at or below the Minimal level.

Figure 7
Average* Writing Scores of 11th Grade Students in SREB States
Participating in SREB/National Assessment Program, 1986



*The range depicted around each average is plus or minus two standard errors; because of rounding and the small numbers, this graph is not precise.

†NAEP Region does not include three SREB states — Maryland, Oklahoma, and Texas.

Table 5
Average Writing Scores for All Students

Nation	2.13
Region†	2.08
Florida	2.07*
Louisiana	1.99*
North Carolina	2.07*
South Carolina	2.07*
Tennessee	2.14
Virginia	2.14
West Virginia	2.16

*Significantly different from the national average.

†NAEP Region does not include three SREB states — Maryland, Oklahoma, and Texas.

What Do the Writing Scores Mean?

The National Assessment of Educational Progress scores writing achievement on a scale from 0 to 4 and defines writing at five different skill levels: Not rateable, Unsatisfactory, Minimal, Adequate, and Elaborated.

Levels of Task Accomplishment

Not rateable (0).
A small percentage of the responses were blank, indecipherable, totally off task, or contained a statement to the effect that the student did not know how to do the task; these responses were considered not rateable.

Unsatisfactory (1).
Students writing papers judged as unsatisfactory provided very abbreviated, circular, or disjointed responses that did not represent even a basic beginning toward addressing the writing task.

Minimal (2).
Students writing at the minimal level recognized some or all of the elements needed to complete the task, but did not manage the elements well enough to assure the purpose of the task would be achieved.

Adequate (3).
Adequate responses included the information and ideas critical to accomplishing the underlying task and were considered likely to be effective in achieving the desired purpose.

Elaborated (4).
Elaborated responses went beyond the essential, reflecting a higher level of coherence and providing more detail to support the points made.

Writing Samples at Minimal and Adequate Levels

In order to successfully accomplish this writing task, students needed to select, organize, and present the details of the painting, and to convey them in terms of the whole painting. Responses to this task were rated as **unsatisfactory, minimal, adequate** or **elaborated,** or they were not rated.*

Minimal. At the **minimal** level of performance, writers provided some details, but in unrelated ways. They created no organizational framework for the reader to use to visualize how the various parts of the picture might fit together. The following description, for example, includes a number of details, but lacks a larger organizing framework.

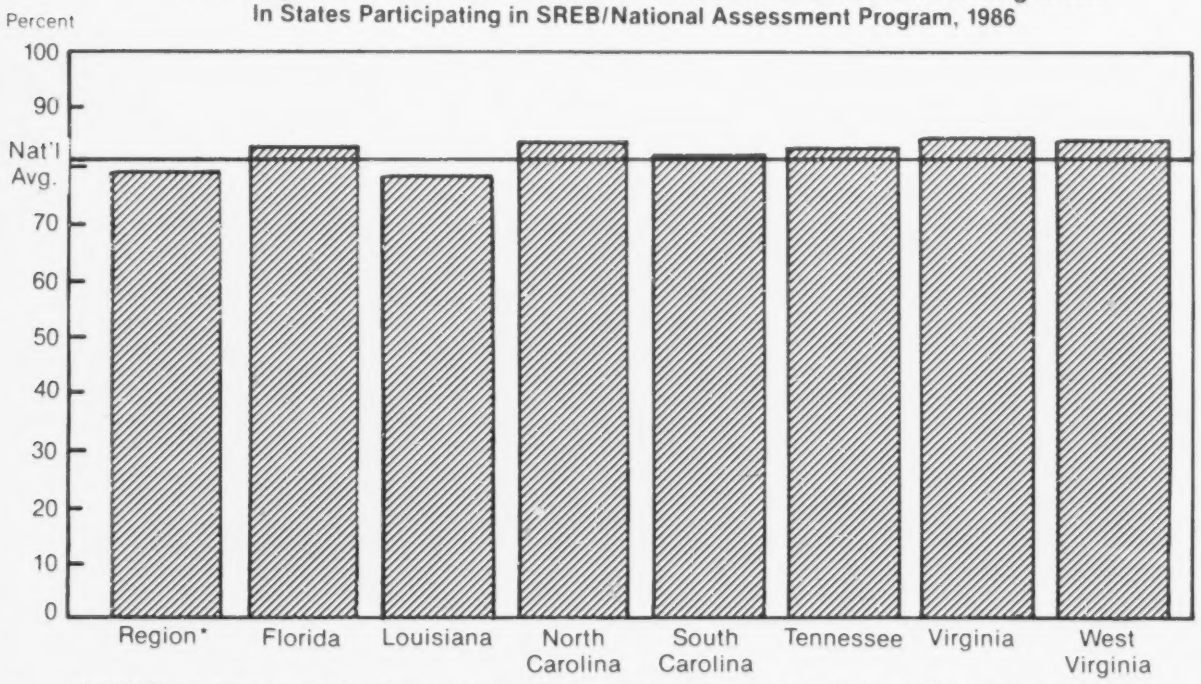
There is a lake in the background. Then on the right side there is a rocky edge. Then there is a dead broken off tree and on a limb there is a clock just drooped over like it melted. The tree is on like box then the is a another clock dropped over the edge of the box. Then there is a stopwatch on the box with ants on it then there is something white on the ground with a clock dropped over it.

Adequate. To perform at the **adequate** level, writers needed to describe and interrelate most of the details in the picture and to present the details within an organizing framework. For example:

In the background there is a lake or ocean with a yellowish brown cliff jarting out of the still water. By the ocean there is a large blue platform. Another platform brown in color is close to you on the left side. On it ther is a orange pocket watch with black ants on it. Hanging of the edge there is a gold pocket watch with a fly on it, but the watch is melted so half of in is on the platform half is off. Right next to the gold watch there is a dead gray tree with a Similer watch melting off it, but silver in color. In the midle of the picture is a melted face with a large eye (closed) with long eye lashes with a Silver pocket watch melting off it.

The writing score averages for the nation and the participating SREB states are at the Minimal level. Overall, more than 80 percent of the students are achieving at this level.

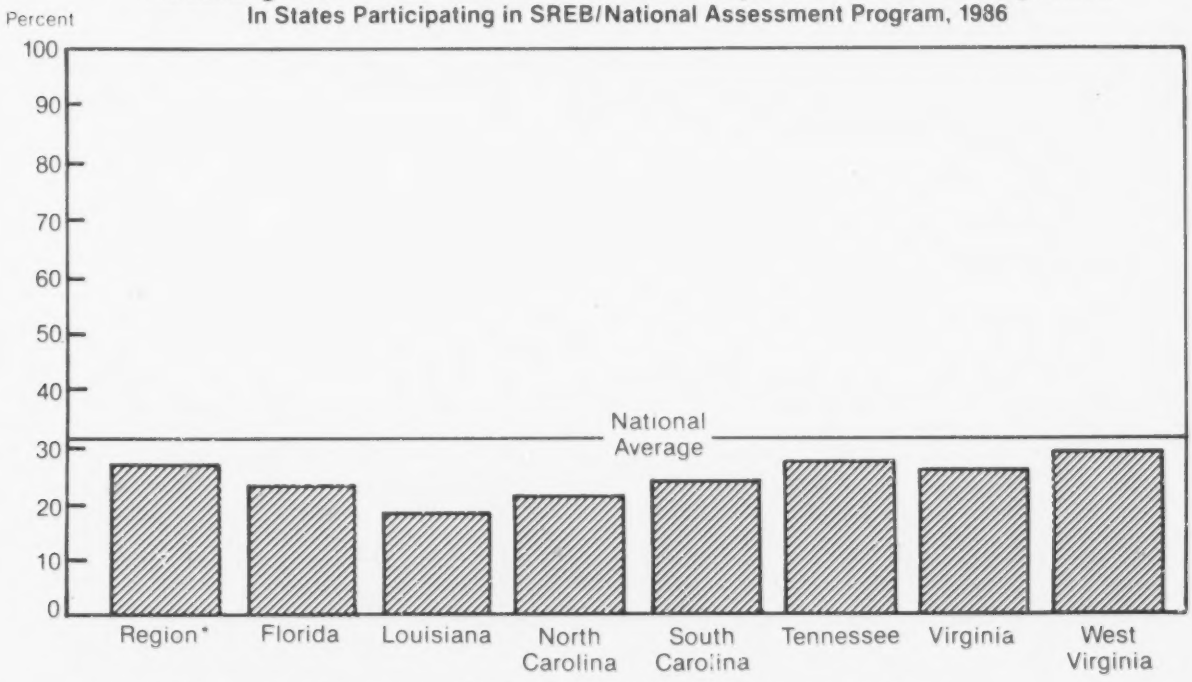
Figure 8
Percentage of 11th Grade Students with Minimal or Better Writing Skills
In States Participating in SREB/National Assessment Program, 1986



*NAEP South Eastern Region does not include three SREB states — Maryland, Oklahoma, and Texas.

Fewer than 25 percent of the 11th-grade students are achieving at the Adequate or Elaborated levels--the skill levels probably necessary to begin college-level work. No participating SREB state has more than 30 percent of its students writing at these levels.

Figure 9
Percentage of 11th Grade Students with Adequate or Better Writing Skills
In States Participating in SREB/National Assessment Program, 1986



*NAEP Region does not include three SREB states — Maryland, Oklahoma, and Texas.

The gap between black and white students in writing is less than that for reading. But at the level of writing which is probably necessary for college-level work, the percentage of white students is twice that of black students.

Figure 10
Levels of Writing Proficiency of 11th Grade Black and White Students
In States Participating in SREB/National Assessment Program, 1986

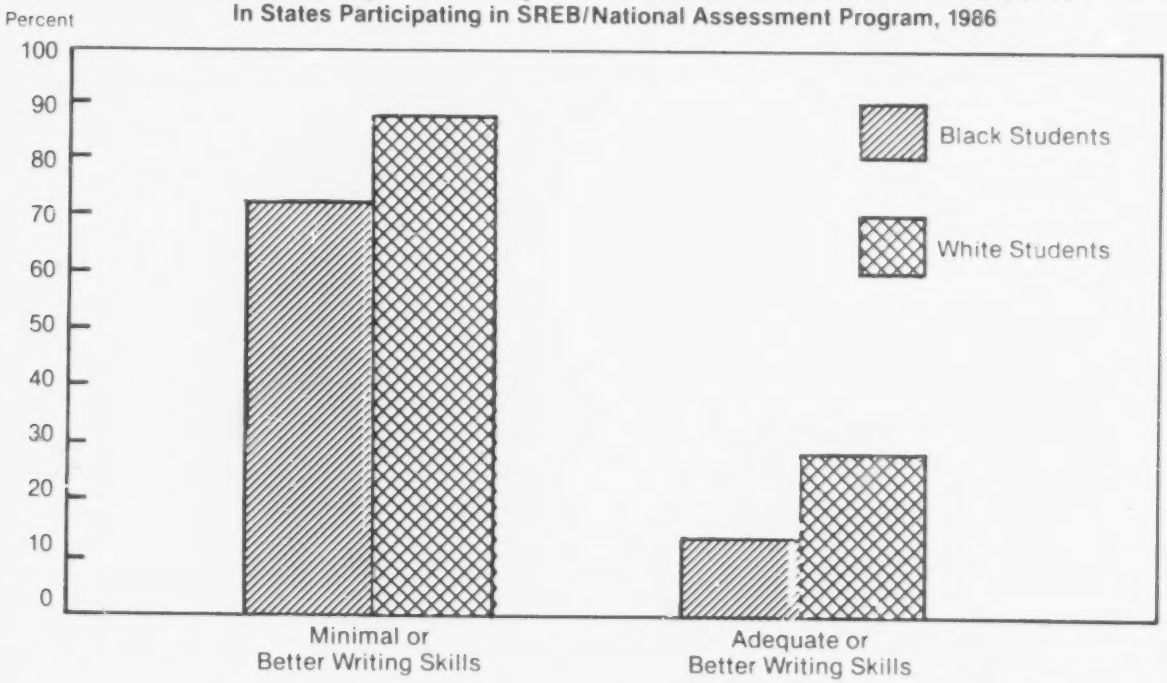


Table 6
Average Writing Scores
for Black and White Students

	Black	White
Nation	1.85	2.21
Florida	1.83	2.17
Louisiana	1.80	2.13*
North Carolina	1.88	2.14*
South Carolina	1.88	2.19
Tennessee	1.84	2.21
Virginia	1.90	2.20
West Virginia	2.01*	2.17

*Significantly different from the national average.

In the nation, the average score for females is substantially higher than for males. This difference narrows when comparing the seven-state average scores.

Table 7
Average Writing Scores
for Male and Female Students

	Males	Females
Nation	2.00	2.24
Florida	2.03	2.12*
Louisiana	1.96	2.01*
North Carolina	2.01	2.12*
South Carolina	2.02	2.12*
Tennessee	2.09*	2.18
Virginia	2.10*	2.24
West Virginia	2.06*	2.26
Seven-state weighted average	2.04	2.13

*Significantly different from the national average.

Several SREB states emphasize the teaching of writing. Some have state testing programs based on their writing instruction programs. These programs give state results. There are no regional or national averages available for these tests.

The National Assessment of Educational Progress method of testing writing differs from the state testing methods. Specifically, in the National Assessment test, a student has 16 minutes to write each of three essays, whereas in state testing programs students generally have 50 minutes to write a single essay. State writing instruction programs stress brainstorming, outlining, drafting, and revising. Such an approach is not possible in the National Assessment writing test. Students may have difficulty with the shorter National Assessment time period after being taught a more structured method of writing.

This difference in the testing methods raises the possibility that the level of writing skills in the participating SREB states could be higher than indicated on the National Assessment test. The different methods of testing writing also have implications for establishing a nationwide program to provide state-by-state comparisons of student achievement. The SREB/National Assessment experience indicates that the different kinds of writing tests should be evaluated with representative samples of students to determine if the differences affect the conclusion about writing skills.

INTERESTING INSIGHT INTO THE DAILY LIVES OF 11TH-GRADE STUDENTS

The responses to questions about home and school environment provide interesting insight into the daily lives of these 11th-grade students. Of the many questions asked, several of general interest have been selected. They include questions about kindergarten, educational level of the parents, amount of television watching, amount of time spent on homework, presence of reading materials in the home, absenteeism, amount of time spent in work activities, and familiarity with computers.

When asked "Did you go to kindergarten?" between 84 percent and 94 percent of the students answered "yes." The answers were similar for black students and white students.

When asked about parental education level* about half of the students in every state reported that their better-educated parent had graduated from high school and had some postsecondary education. Not surprisingly, the test scores are lowest for students whose better-educated parent did not complete high school and highest for those students whose better-educated parent had some form of postsecondary education. Typically, white students reported having parents with higher education levels. The largest percentages of white students reported that their better-educated parent had postsecondary education. This is also true for black students across all states, except in Arkansas and South Carolina, where the highest percentage of black students reported that their better-educated parent had only completed high school.

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* Although the students responded to this question for both mother and father, the data reported here was based on the responses for the parent with the highest educational level.

A general conclusion can be drawn about daily television watching--the more time students spend watching television, the lower their achievement scores in both reading and writing. Students watching six or more hours of television have the lowest achievement scores. The percentage of black students watching six or more hours is more than twice that of white students. However, in most states, the average achievement scores for black students increased as television time increased from 0-2 hours to between 3 and 5 hours.

When asked about the number of different kinds of reading materials in the home--newspapers, a dictionary, more than 25 books, etc.--black students reported having fewer of those items than white students.

In response to the question regarding how much time was usually spent on homework daily, about 75 percent reported spending between 30 minutes to two hours. Less than 10 percent reported having no homework assigned. The average achievement score in both reading and writing increased as the amount of homework increased.

About half of the students responded that they are employed for 15 or more hours per week. At every level of hourly commitment to a job, higher percentages of white students work than black students. Students who work achieve at higher levels than do students who do not. A relatively high percentage of students work for 30 or more hours each week--Florida reports the highest percentage (5 percent).

Being employed part-time does not seem to lower achievement, but when students are absent for more than two days per month, scores began to decline.

On the average, 8 of 10 students have used a computer. Students who have used computers have higher scores.

Methodology of the 1986 SREB/National Assessment Program

The eight SREB states participating in the 1986 SREB/National Assessment of Educational Progress program had the option of testing 11th-grade students in reading and/or writing achievement. Arkansas chose to test reading; North Carolina, Tennessee, and Virginia chose writing; and Florida, Louisiana, South Carolina, and West Virginia tested both.

The National Assessment includes national, regional, and state results. It was not necessary to test every student in the eight states to get reliable state scores. To ensure the collection of representative data within each state and, at the same time, reduce the disruption of the school day, a two-stage random sampling was used. First, a random sample of schools within each state, stratified by population density and school size, was selected by the National Assessment staff. Then, from within each school, a random sample totaling about 2,000 students stratified by race for each subject tested was selected by National Assessment procedures. The only students who were excluded from the sample were those identified by the school administrators as being inappropriate to test--typically, non-English speaking students and handicapped students whose impairment would invalidate the test results.

The reading and writing tests were designed by National Assessment staff and represent a portion of the reading and writing exercises administered by the National Assessment to a national sample in the spring of 1984. The participating SREB states administered the tests in accordance with the National Assessment procedures, with monitoring by the National Assessment staff. All scoring and analyses were by the National Assessment staff.

The SREB-National Assessment reading test included multiple-choice questions testing both literal and inferential comprehension as well as background questions about the student's home environment, school environment, etc. The content of the test has been developed by educators, scholars, and citizens representing many backgrounds and points of view. It is intended to reflect what students should achieve at this point in their education. All questions and reading passages undergo extensive review to eliminate potential bias or lack of sensitivity to particular groups.

The writing test consisted of three essay questions and the same questions about students' backgrounds found in the reading test. Each of the three essay questions was designed to measure a different type of writing skill. One essay was to be informative, one persuasive, and one imaginative. Students were allowed 16 minutes to write on each question.

In reading, the descriptions of achievement levels range from Rudimentary to Advanced. In writing, the descriptions range from Not rateable to Elaborated.